WHAT IS CLAIMED IS:

1. A display device comprising:

a substrate;

a laminate structure formed on the substrate and comprising a plurality of layers including a display region; and

recessed/projected portions formed at least one of an outermost surface of display side, an interface of the plurality of layers and an interface between the substrate and the laminate structure, either one of the substrate and the laminate structure having the outermost surface of display side, projected portions of the recessed/projected portions having a mean circle-equivalent diameter ranging from 50nm to 250nm with the standard deviation of circle-equivalent diameter of the projected portions being within the range of 10 to 50% of the mean circle-equivalent diameter, and a mean height ranging from 100nm to 500nm with the standard deviation of height being within the range of 10 to 50% of the mean height; and the projected portions having a circularity coefficient ranging from 0.6 to 1, and an area ratio ranging from 20 to 75%.

2. The display device according to claim 1, wherein the substrate is a transparent substrate; the plurality of layers of the laminate structure comprises a pair of electrodes and a luminous layer between

the pair of electrodes; one of the pair of electrodes is formed directly on the transparent substrate; the recessed/projected portions are formed on at least one of the outermost surface of display side of the transparent substrate and the interface between the transparent substrate and the laminate structure; and the display device is an organic EL display device.

3. The display device according to claim 1, wherein the substrate is a TFT substrate; the plurality of layers of the laminate structure comprises a liquid crystal layer and a color filter substrate formed directly on the liquid crystal layer; the color filter substrate comprises a transparent substrate, a color film and a black matrix; the color film and the black matrix are formed on the transparent substrate; the recessed/projected portions are formed on the outermost surface of display side of the laminate structure and/or at an interface between the transparent substrate and the black matrix; and the display device is a liquid crystal display device.

4. The display device according to claim 1, wherein the substrate is a transparent supporting substrate; the laminate structure comprises a pair of electrodes and an electric discharge cell between the pair of electrodes, one of the pair of electrodes is a display side transparent electrode formed on the display side surface of the laminate structure;

the recessed/projected portions are formed on the outermost surface of display side of the transparent supporting substrate or the interface between the transparent supporting substrate and the laminate structure; and the display device is a plasma display device.

5. A method for manufacturing a transparent substrate for a display device comprising:

forming a polymer layer containing a copolymer selected from block copolymers and graft copolymers on at least one major surface of a transparent substrate;

subjecting the polymer layer to annealing treatment to phase-separate the copolymer;

removing one of the phases of the copolymer that has been phase-separated to form a mask layer having a pattern formed of the residual phase; and

transcribing the pattern of mask layer onto a surface of the transparent substrate, thereby forming a surface-roughened substrate having a large number of recessed/projected portions, projected portions of the recessed/projected portions being meet the following conditions:

(1) a mean circle-equivalent diameter ranging from 50nm to 250nm with the standard deviation of circle-equivalent diameter of the projected portions being within the range of 10 to 50% of the mean circle-equivalent diameter;

(2) a mean height ranging from 100nm to 500nm with the standard deviation of height being within the range of 10 to 50% of the mean height;

(3) a circularity coefficient ranging from 0.6 to 1; and

(4) an area ratio ranging from 20 to 75%.

6. The method according to claim 5, wherein the copolymer is a block copolymer having a number mean molecular weight ranging from 100000 to 1000000.

7. The method according to claim 5, wherein the copolymer comprises a couple of polymer chains each having a N/(Nc-No) ratio (wherein N is a total number of atoms in the monomer unit; Nc is the number of carbon atom in the monomer unit; and No is the number of oxygen atom in the monomer unit) of 1.4 or more.

8. The method according to claim 5, wherein the copolymer comprises a first polymer and a second polymer at a ratio of 50:50.

9. The method according to claim 5, wherein the annealing treatment is performed at a temperature of not lower than the glass transition temperature of the copolymer.

10. The method according to claim 5, wherein the annealing treatment is performed under anaerobic conditions.

11. The method according to claim 5, wherein the polymer layer further comprises an antioxidant and/or

a photo-deterioration preventing agent.

12. The method according to claim 5, wherein the mask layer is formed by RIE.

13. The method according to claim 5, wherein the mask layer is formed by wet etching.

14. A method for manufacturing a transparent substrate for a display device comprising:

forming a polymer layer containing a copolymer selected from block copolymers and graft copolymers on a cast molding substrate;

subjecting the polymer layer to annealing treatment to phase-separate the copolymer;

removing one of the phases of the copolymer that has been phase-separated to form a mask layer having a pattern formed of the residual phase; and

transcribing the pattern of mask layer onto a surface of the cast molding substrate, thereby obtaining a cast mold pattern having a large number of recessed/projected portions;

forming a resist film on at least one of major surfaces of a transparent substrate;

press-contacting the cast mold pattern onto the resist film to form a resist pattern having a large number of recessed/projected portions; and

working the transparent substrate by using the resist pattern as a mask, projected portions of the recessed/projected portions being meet the following

conditions:

(1) a mean circle-equivalent diameter ranging from 50nm to 250nm with the standard deviation of circle-equivalent diameter of the projected portions being within the range of 10 to 50% of the mean circle-equivalent diameter;

(2) a mean height ranging from 100nm to 500nm with the standard deviation of height being within the range of 10 to 50% of the mean height;

(3) a circularity coefficient ranging from 0.6 to 1; and

(4) an area ratio ranging from 20 to 75%.

15. The method according to claim 14, wherein the copolymer is a block copolymer having a number mean molecular weight ranging from 100000 to 1000000.

16. The method according to claim 14, wherein the copolymer comprises a couple of polymer chains each having a N/(Nc-No) ratio (wherein N is a total number of atoms in the monomer unit; Nc is the number of carbon atom in the monomer unit; and No is the number of oxygen atom in the monomer unit) of 1.4 or more.

17. The method according to claim 14, wherein the copolymer comprises a first polymer and a second polymer at a ratio of 50:50.

18. The method according to claim 14, wherein the annealing treatment is performed at a temperature of not lower than the glass transition temperature of the

copolymer.

19. The method according to claim 14, wherein the annealing treatment is performed under anaerobic conditions.

20. The method according to claim 14, wherein the polymer layer further comprises an antioxidant or a photo-deterioration preventing agent.

21. The method according to claim 14, wherein the mask layer is formed by RIE.

22. The method according to claim 14, wherein the mask layer is formed by wet etching.